

CONTRACT NO. C1200150  
CONVENIENCE CONTRACT FOR PURCHASED SERVICES  
BETWEEN  
STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY  
AND  
FSX EQUIPMENT INC.

This convenience contract is made and entered into by and between the state of Washington, Department of Ecology, referred to as the "AGENCY", and the below named firm, referred to as "CONTRACTOR."

FSX Equipment Inc.  
PO Box 1617  
Granite Falls, WA 98252

PURPOSE

This is a convenience contract for

1. The as-needed purchase, installation and use training of complete and integrated Diesel Particulate Filter (DPF) cleaning / regeneration systems at AGENCY-selected diesel fleet sites.
  - Each DPF cleaning / regeneration system shall consist of:
    - Pneumatic cleaning machine
    - Dust and fume recovery system with High Efficiency Particulate Air (HEPA) filter
    - Flow meter / test bench
    - Thermal regenerative system
    - All inlet, outlet and connective ductwork and other connective hardware necessary to integrate the cleaning / regeneration system not including ducting routed to the outside of the building
    - Air compressor / air dryer system with tank, platform and acoustical enclosure, compatible with pneumatic cleaning machine and dust and fume recovery system. (This is an optional purchase – some diesel fleet owners may have sufficient compressor systems.)
  - Training shall consist of:
    - Training on the use of the DPF cleaning / regeneration system for five to twenty maintenance technicians at diesel fleet sites.
    - One training session shall be conducted for each DPF cleaning / regeneration system sold.
    - Additional trainings may be required on an as-needed basis.
2. As-needed DPF cleaning / regeneration services for AGENCY-selected diesel fleet owners. Services will include testing and evaluation the initial condition of the DPF (soot and ash load, potential cracked cells, etc.), Pneumatic cleaning of DPF, thermal regeneration of DPF (if needed), and evaluation of the post cleaning condition of the DPF. The contractor shall provide free pick-up and delivery within 60 miles of Granite Falls, Washington. Additional no charge

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services include analytical consulting on the overall performance for all DPF included in the customer's fleet.

The primary users of this convenience contract shall be AGENCY, Washington Local Clean Air Agencies, AGENCY and Local Clean Air Agency grant recipients, Washington State Agencies, and Washington Transit Authorities.

#### SPECIAL TERMS AND CONDITIONS

DPF Cleaning /Regeneration Systems: AGENCY will initially purchase two to four DPF cleaning / regeneration systems. Depending on needs and availability of funds, AGENCY may purchase additional DPF cleaning / regeneration systems over the life of the contract.

CONTRACTOR shall deliver the DPF cleaning / regeneration systems to AGENCY-selected diesel fleet owners in Washington State. Diesel fleet owners will provide all necessary electrical wiring and pneumatic piping to power the DPF cleaning / regeneration systems.

DPF Cleaning/Regeneration Services: AGENCY will purchase DPF cleaning / regeneration services on an "as needed" basis.

#### SCOPE OF WORK

- A. Exhibit A, attached hereto and incorporated by reference, contains the General Terms and Conditions governing work to be performed under this contract, the nature of the working relationship between the AGENCY and the CONTRACTOR, and specific obligations of both parties.
- B. The CONTRACTOR shall provide services and staff, and otherwise do all things necessary for or incidental to the performance of work, as set forth below:
  - Task 1: Provide two to four complete and integrated DPF cleaning / regeneration systems to AGENCY-selected diesel fleet owners. (Depending on funding, AGENCY may purchase additional DPF cleaning / regeneration systems over the life of the contract.)
    - Task 1a: Provide a DPF pneumatic cleaning system – Each pneumatic cleaning system must:
      - Provide fully automated service, with a manual override; of high pressure / compressed air to remove soot and ash from the DPF.
      - Accept all types (silicon carbide, cordierite, ceramic fiber, metal fiber, catalyzed, un-catalyzed, etc.) and sizes of DPF.
      - Through an observation window, the pneumatic cleaning machine must allow operator to visually observe the operation of dust removal from DPF.
      - Provide an integrated dust collection system with HEPA filter that fully captures and contains all soot and ash from the pneumatic cleaning machine and flow meter/test bench to prevent escape into the shop environment. The dust collector must use a removable, reusable, and washable filter.
      - Provide a flow meter/test bench that measures the flow rate for the DPF to baseline the loaded filter and to determine the effectiveness of the pneumatically or thermally regenerated filter.



- Provide training on the use of the system for five to twenty maintenance technicians at fleet sites, one training for each machine sold. Additional trainings may be required.

Task 1b: Provide DPF thermal regeneration system – Each thermal regeneration system must:

- Provide fully automated service through a programmable, regulated controller that meets original equipment manufacturer (OEM) specifications for thermal regeneration of DPF.
- Accept all types (silicon carbide, cordierite, ceramic fiber, metal fiber, catalyzed, un-catalyzed, etc.) and sizes of DPF.
- Allow a “ramp up” and “ramp down” temperature increase and decrease to prevent damage to the DPF.
- Include an integrated fume collector to prevent hazardous fumes from escaping the system into the shop environment. The fume collector must capture all smoke from the thermal regeneration machine. The fume collector must use a removable, reusable, and washable filter.
- Provide training on the use of the system for five to twenty maintenance technicians at fleet sites, one training for each machine sold. Additional trainings may be required.

Task 1 Deliverables:

- Two to four complete and integrated DPF cleaning / regeneration systems provided to AGENCY-selected diesel fleet owners.
- Trainings on the use of the systems for five to twenty maintenance technicians provided to each fleet owner that receives a DPF cleaning / regeneration system.

Task 1 Timeline: by June 30, 2013

Task 2: Provide DPF air compressor / air dryer systems with tank, platform and acoustical enclosure, compatible with pneumatic cleaning machine and dust and fume recovery systems to AGENCY-selected diesel fleet owners. (Since some diesel fleet owners may have sufficient compressor systems in place, this is an optional purchase.)

Task 2 Deliverables:

- DPF air compressor / air dryer systems provided to AGENCY-selected diesel fleet owners.

Task 2 Timeline: by June 30, 2013

Task 3: Provide DPF cleaning / regeneration service on an as-needed basis to AGENCY-selected diesel fleet owners. Services should include testing and evaluating the initial condition of the filter (soot and ash load, potential cracked cells, etc.), pneumatic cleaning of filter, thermal regeneration (if needed) of filter, and evaluating the post condition of the filter after final cleanings.

Provide free pick-up and delivery within sixty mile of Granite Falls, WA. Additional no charge services include analytical consulting on the overall performance for all DPF included in the customer's fleet.

Task 3 Deliverables:

- DPF cleaning / regeneration services provided to AGENCY-selected diesel fleet owners.

Task 3 Timeline: by June 30, 2013

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#### PERIOD OF PERFORMANCE

The period of performance under this contract will be from October 24, 2011 through June 30, 2013. Amendments extending the period of performance, if any, shall be at the sole discretion of AGENCY. AGENCY reserves the right to extend the contract for two additional one year periods.

#### SOURCE OF FUNDS

Funding for this project is provided by the Washington State Air Pollution Control Account of the Washington State Local Toxics Control Account.

This contract is contingent upon the availability of funding. In the event funding becomes unavailable after the effective date and prior to normal completion, the AGENCY may terminate the contract under the "Termination for Convenience" clause, without the ten day notice requirement, subject to renegotiation at the AGENCY'S discretion under those new funding limitations and conditions. In the event additional funding becomes available, the contract may be renegotiated to provide for additional related services.

#### COMPENSATION

This is a performance-based contract, in which payment to the CONTRACTOR is based on the successful completion of expected deliverables. Compensation for the work provided in accordance with Governor's Executive Order 10-07. The parties have determined that the cost of accomplishing the work herein will not exceed \$ 825,000 (eight hundred twenty-five thousand dollars) inclusive of all costs. Payment for satisfactory performance of the work shall not exceed this amount unless the parties mutually agree to a higher amount. Compensation for services shall be based on the terms set forth in accordance with the tasks listed in the scope of work and budget which is incorporated herein. AGENCY will not make payment until it has reviewed and accepted the completed work.

#### BILLING PROCEDURES AND PAYMENT

AGENCY will pay CONTRACTOR upon acceptance of services provided and receipt of properly completed invoices – using Invoice Voucher A19-1A, which shall be submitted to the Fiscal Manager not more often than monthly.

The invoices (Invoice Voucher A19-1A) shall describe and document, to AGENCY's satisfaction, a description of the work performed the progress of the project, and fees. The invoice shall include reference to Contract No. C1200150. If expenses are invoiced, provide a detailed breakdown of each type. A receipt must accompany any single expenses in the amount of \$50.00 or more in order to receive reimbursement.

Payment shall be considered timely if made by AGENCY within thirty (30) calendar days after receipt of properly completed invoices. Payment shall be sent to the address designated by the CONTRACTOR.

AGENCY may, in its sole discretion, terminate the contract or withhold payments claimed by the CONTRACTOR for services rendered if the CONTRACTOR fails to satisfactorily comply with any term or condition of this contract.

No payments in advance or in anticipation of services or supplies to be provided under this contract shall be made by AGENCY.

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### CONTRACT MANAGEMENT

The Contract Manager for each of the parties shall be the contact person for all communications and billings regarding the performance of this contract.

CONTRACTOR Contract Manager	AGENCY Contract Manager	AGENCY Fiscal Manager
Cole L. Waldo FSX Equipment, Inc. PO Box 1617 Granite Falls, WA 98252 Phone: 360 691 2999 Cell: 425 231 1011 <a href="mailto:cwaldo@fsxinc.com">cwaldo@fsxinc.com</a>	Mike Boyer PO Box 47600 Olympia, WA 98504 Phone: 360 407 6863 <a href="mailto:mboy461@ecy.wa.gov">mboy461@ecy.wa.gov</a>	Cheryl Witt PO Box 47600 Olympia, WA 98504 Phone: 360 407 6805 <a href="mailto:cwit461@ecy.wa.gov">cwit461@ecy.wa.gov</a>

### INSURANCE

The CONTRACTOR shall provide insurance coverage as set out in this section. The intent of the required insurance is to protect the State should there be any claims, suits, actions, costs, damages or expenses arising from any negligent or intentional act or omission of the CONTRACTOR or subcontractor, or agents of either, while performing under the terms of this contract. The CONTRACTOR shall provide insurance coverage, which shall be maintained in full force and effect during the term of this contract, as follows:

1. Commercial General Liability Insurance Policy. Provide a Commercial General Liability Insurance Policy, including contractual liability, in adequate quantity to protect against legal liability arising out of contract activity but no less than \$1,000,000 per occurrence.

Additionally, the CONTRACTOR is responsible for ensuring that any subcontractors provide adequate insurance coverage for the activities arising out of subcontracts.

2. Automobile Liability. In the event that services delivered pursuant to this contract involve the use of vehicles, either owned or unowned by the CONTRACTOR, automobile liability insurance shall be required. The minimum limit for automobile liability is:

\$1,000,000 per occurrence, using a Combined Single Limit for bodily injury and property damage.

3. The insurance required shall be issued by an insurance company/ies authorized to do business within the state of Washington, and shall name the state of Washington, its agents and employees as additional insured's under the insurance policy/ies. All policies shall be primary to any other valid and collectable insurance. CONTRACTOR shall instruct the insurers to give AGENCY thirty (30) calendar days advance notice of any insurance cancellation.

CONTRACTOR shall submit to AGENCY within fifteen (15) calendar days of the contract effective date, a certificate of insurance that outlines the coverage and limits defined in the *Insurance* section. CONTRACTOR shall submit renewal certificates as appropriate during the term of the contract.

### ASSURANCES

AGENCY and the CONTRACTOR agree that all activity pursuant to this contract will be in accordance with all the applicable current federal, state and local laws, rules, and regulations.

The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that proper record-keeping is essential for the integrity of the financial system and for the ability to detect and prevent fraud. The document also outlines the responsibilities of individuals involved in the process, including the need for transparency and accountability.

The second part of the document provides a detailed overview of the various methods used to collect and analyze data. It describes the different types of data sources, such as surveys, interviews, and focus groups, and explains how this information is used to identify trends and patterns. The document also discusses the challenges associated with data collection and analysis, such as ensuring the reliability and validity of the data.

The third part of the document focuses on the implementation of the findings from the research. It discusses the various strategies and techniques used to put the research into practice, including the development of policies and procedures, the training of staff, and the monitoring and evaluation of the results. The document also highlights the importance of ongoing communication and collaboration between all stakeholders involved in the process.

ORDER OF PRECEDENCE

Each of the exhibits listed below is by this reference hereby incorporated into this contract. In the event of an inconsistency in this contract, the inconsistency shall be resolved by giving precedence in the following order:

- Applicable Federal and state of Washington statutes and regulations;
- Special Terms and Conditions as contained in this basic contract instrument;
- Exhibit A – General Terms and Conditions;
- Exhibit B – CONTRACTOR's Proposal dated September 7, 2011; and
- Request for Qualifications and Quotations No. RFQQ 1204 AQP, incorporated by this reference;
- Any other provision, term or material incorporated by reference or otherwise incorporated.

ENTIRE AGREEMENT

This contract, including referenced exhibits, represents all the terms and conditions agreed upon by the parties. No other statements or representations, written or oral, shall be deemed a part hereof.

CONFORMANCE

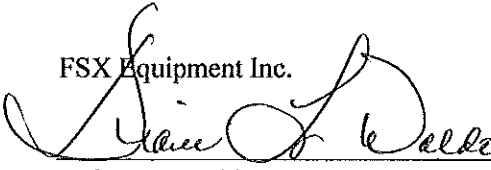
If any provision of this contract violates any statute or rule of law of the state of Washington, it is considered modified to conform to that statute or rule of law.

APPROVAL

This contract shall be subject to the written approval of AGENCY's authorized representative and shall not be binding until so approved. The contract may be altered, amended, or waived only by a written amendment executed by both parties.

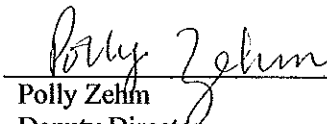
THIS CONTRACT is signed by the persons signing below, who warrant they have the authority to sign the contract.

FSX Equipment Inc.

  
Diane L. Waldo  
President

10/19/11  
Date

Department of Ecology

  
Polly Zehm  
Deputy Director

10/24/11  
Date

Approved as to form only: Attorney General Office

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt, \quad (1)$$

where  $x$  is a real number. It is shown that the function  $f(x)$  is increasing and concave down on the interval  $(-\infty, \infty)$ . Moreover, it is proved that the function  $f(x)$  has a horizontal asymptote at  $y = \frac{\pi}{2}$  as  $x \rightarrow \infty$  and  $y = -\frac{\pi}{2}$  as  $x \rightarrow -\infty$ .

2. In the second part of the paper, we consider the function  $g(x)$  defined by the equation

$$g(x) = \int_0^x \frac{t}{1+t^2} dt, \quad (2)$$

where  $x$  is a real number. It is shown that the function  $g(x)$  is an odd function and that it has a horizontal asymptote at  $y = \frac{\pi}{2}$  as  $x \rightarrow \infty$  and  $y = -\frac{\pi}{2}$  as  $x \rightarrow -\infty$ .

3. Finally, in the third part of the paper, we study the function  $h(x)$  defined by the equation

$$h(x) = \int_0^x \frac{1}{1+t^4} dt, \quad (3)$$

where  $x$  is a real number. It is shown that the function  $h(x)$  is an even function and that it has a horizontal asymptote at  $y = \frac{\pi}{2}$  as  $x \rightarrow \infty$  and  $y = -\frac{\pi}{2}$  as  $x \rightarrow -\infty$ .

## EXHIBIT A - GENERAL TERMS AND CONDITIONS

### Definitions

As used throughout this contract, the following terms shall have the meaning set forth below:

- A. "AGENCY" shall mean the Department of Ecology of the state of Washington, any division, section, office, unit or other entity of the AGENCY, or any of the officers or other officials lawfully representing that AGENCY.
- B. "AGENT" shall mean the Director, and/or the delegate authorized in writing to act on the Director's behalf.
- C. "CONTRACTOR" shall mean that firm, provider, organization, individual or other entity performing service(s) under this contract, and shall include all employees of the CONTRACTOR.
- D. "SUBCONTRACTOR" shall mean one not in the employment of the CONTRACTOR, who is performing all or part of those services under this contract under a separate contract with the CONTRACTOR. The terms "SUBCONTRACTOR" and "SUBCONTRACTORS" means SUBCONTRACTOR(s) in any tier.

### Access to Data

In compliance with RCW 39.29.080, the CONTRACTOR shall provide access to data generated under this contract to AGENCY, the Joint Legislative Audit and Review Committee, and the State Auditor at no additional cost. This includes access to all information that supports the findings, conclusions and recommendations of the CONTRACTOR's reports, including computer models and methodology for those models.

### Advance Payments Prohibited

No payments in advance of or in anticipation of goods or services to be provided under this contract shall be made by the AGENCY.

### Amendments

This contract may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

### Americans with Disabilities Act (ADA) of 1990, Public Law 101-336, Also Referred to as the "ADA" 28 CFR Part 35

The CONTRACTOR must comply with the ADA, which provides comprehensive civil rights protection to individuals with disabilities in the areas of employment, public accommodations, state and local government services, and telecommunications.

### Assignment

Neither this contract, nor any claim arising under this contract, shall be transferred or assigned by the CONTRACTOR without prior written consent of the AGENCY.

### Attorneys' Fees

In the event of litigation or other action brought to enforce contract terms, each party agrees to bear its own attorney fees and costs.

### Confidentiality/Safeguarding of Information

The CONTRACTOR shall not use or disclose any information concerning the AGENCY, or information that may be classified as confidential, for any purpose not directly connected with the administration of this contract, except with prior written consent of the AGENCY, or as may be required by law.



Conflict of Interest

Notwithstanding any determination by the Executive Ethics Board or other tribunal, the AGENCY may, in its sole discretion, by written notice to the CONTRACTOR terminate this contract if it is found after due notice and examination by the AGENT that there is a violation of the Ethics in Public Service Act, Chapter 42.52 RCW; or any similar statute involving the CONTRACTOR in the procurement of, or performance under this contract.

In the event this contract is terminated as provided above, the AGENCY shall be entitled to pursue the same remedies against the CONTRACTOR as it could pursue in the event of a breach of the contract by the CONTRACTOR. The rights and remedies of the AGENCY provided for in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law. The existence of facts upon which the AGENT makes any determination under this clause shall be an issue and may be reviewed as provided in the "Disputes" clause of this contract.

Covenant Against Contingent Fees

The CONTRACTOR warrants that no person or selling agent has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established agents maintained by the CONTRACTOR for securing business.

The AGENCY shall have the right, in the event of breach of this clause by the CONTRACTOR, to annul this contract without liability or, in its discretion, to deduct from the contract price or consideration or recover by other means the full amount of such commission, percentage, brokerage or contingent fee.

Disallowed Costs

The CONTRACTOR is responsible for any audit exceptions or disallowed costs incurred by its own organization or that of its SUBCONTRACTORS.

Disputes

Except as otherwise provided in this contract, when a dispute arises between the parties and it cannot be resolved by direct negotiation, either party may request a dispute hearing with AGENT.

1. The request for a dispute hearing must:
  - A. Be in writing;
  - B. State the disputed issue(s);
  - C. State the relative positions of the parties;
  - D. State the CONTRACTOR's name, address, and contract number; and
  - E. Be mailed to the AGENT and the other party's (respondent's) contract manager within three (3) business days after the parties agree that they cannot resolve the dispute.
2. The respondent shall send a written answer to the requester's statement to both the agent and the requester within five (5) business days.
3. The AGENT shall review the written statements and reply in writing to both parties within ten (10) business days. The AGENT may extend this period if necessary by notifying the parties.
4. The parties agree that this dispute process shall precede any action in a judicial or quasi-judicial tribunal.

Nothing in this contract shall be construed to limit the parties' choice of a mutually acceptable method, in addition to the dispute resolution procedure outlined above.

Duplicate Payment

The AGENCY shall not pay the CONTRACTOR, if the CONTRACTOR has charged or will charge the state of Washington or any other party under any other contract or agreement, for the same services or expenses.

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Funding

In the event funding from state, federal, or other sources is withdrawn, reduced, or limited in any way after the effective date of this contract and prior to normal completion, the AGENCY may terminate the contract under the "Termination for Convenience" clause, without the ten (10) day notice requirement, subject to renegotiation at the AGENCY'S discretion under those new funding limitations and conditions.

Governing Law

This contract shall be construed and interpreted in accordance with the laws of the state of Washington, and the venue of any action brought hereunder shall be in the Superior Court for Thurston County.

Indemnification

To the fullest extent permitted by law, CONTRACTOR shall indemnify, defend, and hold harmless state, agencies of state and all officials, agents and employees of state, from and against all claims for injuries or death arising out of or resulting from the performance of the contract.

CONTRACTOR expressly agrees to indemnify, defend and hold harmless the state for any claim arising out of or incident to CONTRACTOR's or any SUBCONTRACTOR's performance or failure to perform the contract. CONTRACTOR's obligation to indemnify, defend, and hold harmless the state shall not be eliminated or reduced by any actual or alleged concurrent negligence of State or its agents, agencies, employees and officials.

CONTRACTOR waives its immunity under Title 51 RCW to the extent it is required to indemnify, defend and hold harmless the State and its agencies, officials, agents or employees.

Independent Capacity of the CONTRACTOR

The parties intend that an independent CONTRACTOR relationship will be created by this contract. The CONTRACTOR and his or her employees or agents performing under this contract are not employees or agents of the AGENCY. The CONTRACTOR will not hold himself/herself out as or claim to be an officer or employee of the AGENCY or of the state of Washington by reason hereof, nor will the CONTRACTOR make any claim of right, privilege or benefit that would accrue to such employee under law. Conduct and control of the work will be solely with the CONTRACTOR.

Industrial Insurance Coverage

The CONTRACTOR shall comply with the provisions of Title 51 RCW, Industrial Insurance. If the CONTRACTOR fails to provide industrial insurance coverage or fails to pay premiums or penalties on behalf of its employees, as may be required by law, AGENCY may collect from the CONTRACTOR the full amount payable to the Industrial Insurance accident fund. The AGENCY may deduct the amount owed by the CONTRACTOR to the accident fund from the amount payable to the CONTRACTOR by the AGENCY under this contract, and transmit the deducted amount to the Washington State Department of Labor and Industries, (L&I) Division of Insurance Services. This provision does not waive any of L&I's right to collect from the CONTRACTOR.

Invoice

Invoice Voucher A-19-1 shall provide:

1. Contract Number
2. Month of Service
3. Other Janitorial tasks as directed to perform indicated hours work, hourly rate, and total cost
4. Total amount of invoice



Licensing, Accreditation and Registration

The CONTRACTOR shall comply with all applicable local, state and federal licensing, accreditation and registration requirements/standards, necessary for the performance of this contract.

Limitation of Authority

Only the AGENT or AGENT'S delegate by writing (delegation to be made prior to action) shall have the express, implied, or apparent authority to alter, amend, modify, or waive any clause or condition of this contract. Furthermore, any alteration, amendment, modification, or waiver or any clause or condition of this contract is not effective or binding unless made in writing and signed by the AGENT.

Non-compliance with Non-discrimination Laws

In the event of the CONTRACTOR's non-compliance or refusal to comply with any non-discrimination law, regulation or policy, this contract may be rescinded, canceled or terminated in whole or in part, and the CONTRACTOR may be declared ineligible for further contracts with the AGENCY. The CONTRACTOR shall, however, be given a reasonable time in which to cure this non-compliance. Any dispute may be resolved in accordance with the "Disputes" procedure set forth herein.

Payment

Payment shall be made within thirty (30) days of a properly completed invoice, form A19-1A.

OSHA/WISHA Standards

CONTRACTOR agrees to comply with conditions of the Federal Occupational Safety and Health Acts of 1970 (OSHA), and the Washington Industrial Safety and Health Act of 1973 (WISHA) during the entire term(s) of said contract.

Prevailing Wage

CONTRACTOR agrees to comply with conditions,  
<http://www.lni.wa.gov/TradesLicensing/PrevWage/default.asp> during the entire term(s) of said contract.

Questions should be directed to the Industrial Statistician, Department of Labor and Industries. By this reference these wage rates are made part of this contract.

The CONTRACTOR must submit to the Industrial Statistician of the Department of Labor and Industries a "Statement of Intent to Pay Prevailing Wages." A copy of the approved intent statements must be submitted to the AGENCY in order to receive the first progress payment on this contract.

Privacy

Personal information including, but not limited to, "Protected Health Information", collected, used, or acquired in connection with this contract shall be protected against unauthorized use, disclosure, modification or loss. CONTRACTOR shall ensure its directors, officers, employees, SUBCONTRACTORS or agents use personal information solely for the purposes of accomplishing the services set forth herein. CONTRACTOR and its SUBCONTRACTORS agree not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without the express written consent of the AGENCY or as otherwise required by law.

Any breach of this provision may result in termination of the contract and the demand for return of all personal information. The CONTRACTOR agrees to indemnify and hold harmless the AGENCY for any damages related to the CONTRACTOR's unauthorized use of personal information.

Publicity

The CONTRACTOR agrees to submit to the AGENCY all advertising and publicity matters relating to this contract wherein the AGENCY'S name is mentioned or language used from which the connection of

the first part of the paper, we consider the case where the system is in a steady state.

In the second part of the paper, we consider the case where the system is in a transient state. We show that the system is in a transient state if and only if the system is in a steady state.

In the third part of the paper, we consider the case where the system is in a steady state. We show that the system is in a steady state if and only if the system is in a transient state.

In the fourth part of the paper, we consider the case where the system is in a steady state. We show that the system is in a steady state if and only if the system is in a transient state.

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the AGENCY'S name may, in the AGENCY'S judgment, be inferred or implied. The CONTRACTOR agrees not to publish or use such advertising and publicity matters without the prior written consent of the AGENCY.

#### Records Maintenance

The CONTRACTOR shall maintain books, records, documents, data and other evidence relating to this contract and performance of the services described herein, including but not limited to accounting procedures and practices that sufficiently and properly reflect all direct and indirect costs of any nature expended in the performance of this contract.

CONTRACTOR shall retain such records for a period of six (6) years following the date of final payment. At no additional cost, these records, including materials generated under the contract, shall be subject at all reasonable times to inspection, review or audit by the AGENCY, personnel duly authorized by the AGENCY, the Office of the State Auditor, and federal and state officials so authorized by law, regulation or agreement. If any litigation, claim or audit is started before the expiration of the six (6) year period, the records shall be retained until all litigation, claims or audit findings involving the records have been resolved.

#### Registration with Department of Revenue

The CONTRACTOR shall complete registration with the Washington State Department of Revenue and be responsible for payment of all taxes due on payments made under this contract.

#### Right of Inspection

The CONTRACTOR shall provide right of access to its facilities to the AGENCY, or any of its officers, or to any other authorized agent or official of the state of Washington or the federal government, at all reasonable times, in order to monitor and evaluate performance, compliance, and/or quality assurance under this contract.

#### Severability

The provisions of this contract are intended to be severable. If any term or provision is illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of the contract.

#### Site Security

While on AGENCY premises, CONTRACTOR, its agents, employees or SUBCONTRACTORS shall conform in all respects with physical, fire or other security policies or regulations.

#### Subcontracting

Neither the CONTRACTOR nor any SUBCONTRACTOR shall enter into subcontracts for any of the work contemplated under this contract without obtaining prior written approval of the AGENCY. In no event shall the existence of the subcontract operate to release or reduce the liability of the CONTRACTOR to the AGENCY for any breach in the performance of the CONTRACTOR's duties. This clause does not include contracts of employment between the CONTRACTOR and personnel assigned to work under this contract.

Additionally, the CONTRACTOR is responsible for ensuring that all terms, conditions, assurances and certifications set forth in this agreement are carried forward to any subcontracts. CONTRACTOR and its SUBCONTRACTORS agree not to release, divulge, publish, transfer, sell or otherwise make known to unauthorized persons personal information without the express written consent of the AGENCY or as provided by law.

1. The first part of the paper is devoted to the study of the properties of the function  $f(x)$  defined by the equation

$$f(x) = \int_0^x \frac{1}{1+t^2} dt$$
 and to the investigation of its behavior as  $x \rightarrow \infty$ .

2. In the second part, we consider the function  $F(x)$  defined by the equation

$$F(x) = \int_0^x \frac{1}{1+t^2} dt$$
 and study its properties for large values of  $x$ .

3. The third part of the paper is devoted to the study of the function  $G(x)$  defined by the equation

$$G(x) = \int_0^x \frac{1}{1+t^2} dt$$
 and to the investigation of its behavior as  $x \rightarrow \infty$ .

4. In the fourth part, we consider the function  $H(x)$  defined by the equation

$$H(x) = \int_0^x \frac{1}{1+t^2} dt$$
 and study its properties for large values of  $x$ .

5. The fifth part of the paper is devoted to the study of the function  $I(x)$  defined by the equation

$$I(x) = \int_0^x \frac{1}{1+t^2} dt$$
 and to the investigation of its behavior as  $x \rightarrow \infty$ .

Taxes

All payments accrued because of payroll taxes, unemployment contributions, any other taxes, insurance or other expenses for the CONTRACTOR or its staff shall be the sole responsibility of the CONTRACTOR.

Termination for Cause

In the event the AGENCY determines the CONTRACTOR has failed to comply with the conditions of this contract in a timely manner, the AGENCY has the right to suspend or terminate this contract. Before suspending or terminating the contract, the AGENCY shall notify the CONTRACTOR in writing of the need to take corrective action. If corrective action is not taken within thirty (30) calendar days, the contract may be terminated or suspended.

In the event of termination or suspension, the CONTRACTOR shall be liable for damages as authorized by law including, but not limited to, any cost difference between the original contract and the replacement or cover contract and all administrative costs directly related to the replacement contract, e.g., cost of the competitive bidding, mailing, advertising and staff time.

The AGENCY reserves the right to suspend all or part of the contract, withhold further payments, or prohibit the CONTRACTOR from incurring additional obligations of funds during investigation of the alleged compliance breach and pending corrective action by the CONTRACTOR or a decision by the AGENCY to terminate the contract. A termination shall be deemed a "Termination for Convenience" if it is determined that the CONTRACTOR: (1) was not in default; or (2) failure to perform was outside of his or her control, fault or negligence. The rights and remedies of the AGENCY provided in this contract are not exclusive and are, in addition to any other rights and remedies, provided by law.

Termination for Convenience

Except as otherwise provided in this contract, the AGENCY may, by ten (10) calendar days written notice, beginning on the second day after the mailing, terminate this contract, in whole or in part. If this contract is so terminated, the AGENCY shall be liable only for payment required under the terms of this contract for services rendered or goods delivered prior to the effective date of termination.

Termination Procedures

Upon termination of this contract, the AGENCY, in addition to any other rights provided in this contract, may require the CONTRACTOR to deliver to the AGENCY any property specifically produced or acquired for the performance of such part of this contract as has been terminated. The provisions of the "Treatment of Assets" clause shall apply in such property transfer.

The AGENCY shall pay to the CONTRACTOR the agreed upon price, if separately stated, for completed work and services accepted by the AGENCY, and the amount agreed upon by the CONTRACTOR and the AGENCY for (i) completed work and services for which no separate price is stated, (ii) partially completed work and services, (iii) other property or services that are accepted by the AGENCY, and (iv) the protection and preservation of property, unless the termination is for default, in which case the AGENT shall determine the extent of the liability of the AGENCY. Failure to agree with such determination shall be a dispute within the meaning of the "Disputes" clause of this contract.

The AGENCY may withhold from any amounts due the CONTRACTOR such sum as the AGENT determines to be necessary to protect the AGENCY against potential loss or liability. The rights and remedies of the AGENCY provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law or under this contract.





After receipt of a notice of termination, and except as otherwise directed by the AGENT, the CONTRACTOR shall:

1. Stop work under the contract on the date, and to the extent specified, in the notice;
2. Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the contract that is not terminated;
3. Assign to the AGENCY, in the manner, at the times, and to the extent directed by the AGENT, all of the rights, title, and interest of the CONTRACTOR under the orders and subcontracts so terminated, in which case the AGENCY has the right, at its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts;
4. Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, with the approval or ratification of the AGENT to the extent AGENT may require, which approval or ratification shall be final for all the purposes of this clause;
5. Transfer title to the AGENCY and deliver in the manner, at the times, and to the extent directed by the AGENT any property which, if the contract had been completed, would have been required to be furnished to the AGENCY;
6. Complete performance of such part of the work as shall not have been terminated by the AGENT; and
7. Take such action as may be necessary, or as the AGENT may direct, for the protection and preservation of the property related to this contract, which is in the possession of the CONTRACTOR and in which the AGENCY has or may acquire an interest.

#### Treatment of Assets

1. Title to all property furnished by the AGENCY shall remain in the AGENCY. Title to other property, the cost of which is reimbursable to the CONTRACTOR under this contract, shall pass to and vest in the AGENCY upon (i) issuance for use of such property in the performance of this contract, or (ii) commencement of use of such property in the performance of this contract, or (iii) reimbursement of the cost thereof by the AGENCY in whole or in part, whichever first occurs.
2. Any property of the AGENCY furnished to the CONTRACTOR shall, unless otherwise provided herein or approved by the AGENCY, be used only for the performance of this contract.
3. The CONTRACTOR shall be responsible for any loss or damage to property of the AGENCY that results from the negligence of the CONTRACTOR or that results from the failure on the part of the CONTRACTOR to maintain and administer that property in accordance with sound management practices.
4. If any AGENCY property is lost, destroyed or damaged, the CONTRACTOR shall immediately notify the AGENCY and shall take all reasonable steps to protect the property from further damage.
5. The CONTRACTOR shall surrender to the AGENCY all property of the AGENCY prior to settlement upon completion, termination or cancellation of this contract.
6. All reference to the CONTRACTOR under this clause shall also include CONTRACTOR's employees, agents or SUBCONTRACTOR's.

#### Waiver

Waiver of any default or breach shall not be deemed a waiver of any subsequent default or breach. Any waiver shall not be construed to be a modification of the terms of this contract unless stated to be such in writing and signed by authorized representative of the AGENCY.





FSX Equipment Inc.  
10909-A Mountain Loop Hwy.  
P.O. Box 1617  
Granite Falls, WA 98252-1617  
Phone: 360-691-2999  
Fax: 360-691-5991  
[www.FSXINC.com](http://www.FSXINC.com)  
email: [FSX1@fsxinc.com](mailto:FSX1@fsxinc.com)

September 7, 2011

Department of Ecology  
Attn: Cheryl Witt, RFQQ Coordinator  
PO Box 47600  
Olympia, WA 98504-7600

RE: Letter of Submittal for RFQQ No. ECY 1204 AQP

Dear Ms Witt,

This letter and the attached pages are our formal bid for RFQQ No. ECY 1204 AQP. FSX has an excellent history on cleaning Diesel Particulate Filters (DPF) and has an industry proven and recommended line of DPF cleaning equipment. The equipment offered under this proposal is the same equipment that is used in house at FSX for cleaning filters for OEM remanufacturing of DPF and used to service a number of transit properties in the State of Washington.

FSX equipment is recommended and distributed by the following major OEM's:

- Cummins Corporation
- Paccar Corporation (Kenworth & Peterbilt)
- Volvo Corporation (Volvo, Mack Truck, Renault Truck)
- Navistar Corporation

1. Contractor

FSX Equipment Inc.  
10404 Mountain Loop Highway  
P.O. Box 1617  
Granite Falls, WA 98252  
Tel 360-691-2999  
Fax 360-691-5991  
e-mail: [cwaldo@fsxinc.com](mailto:cwaldo@fsxinc.com)

2. Officers

Diane L. Waldo, President & CEO, COB  
20411 84<sup>th</sup> St. NE  
Granite Falls, WA 98252  
Cell 425-923-0330  
Home 360-691-5420

Cole L. Waldo, Vice President, Sec., Treas.  
20411 84<sup>th</sup> St. NE  
Granite Falls, WA 98252  
Cell 425-231-1011

3. **Legal Status**

Corporation in State of Washington  
Incorporated in 2007

4. **Identification Numbers**

Federal EIN: 26-1234005  
WA UBI: 602-771-108

5. **Operating Location**

Granite Falls, WA at primary business address listed above

6. **Affiliated Employees or Officers**

None

Sincerely,

See scanned signature on next page

Diane Waldo  
President  
FSX Equipment Inc.  
360-691-2999  
[diane@fsxinc.com](mailto:diane@fsxinc.com)

FSX Equipment Inc. – DPF Filter Cleaning Equipment & Services – Bid Proposal  
State of Washington Department of Ecology RFQQ # ECY1204 AQP

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FSX Equipment Inc. – DPF Filter Cleaning Equipment & Services – Bid Proposal  
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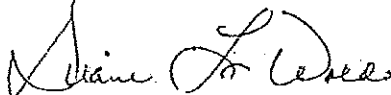
5. Operating Location

Granite Falls, WA at primary business address listed above

6. Affiliated Employees or Officers

None

Sincerely,



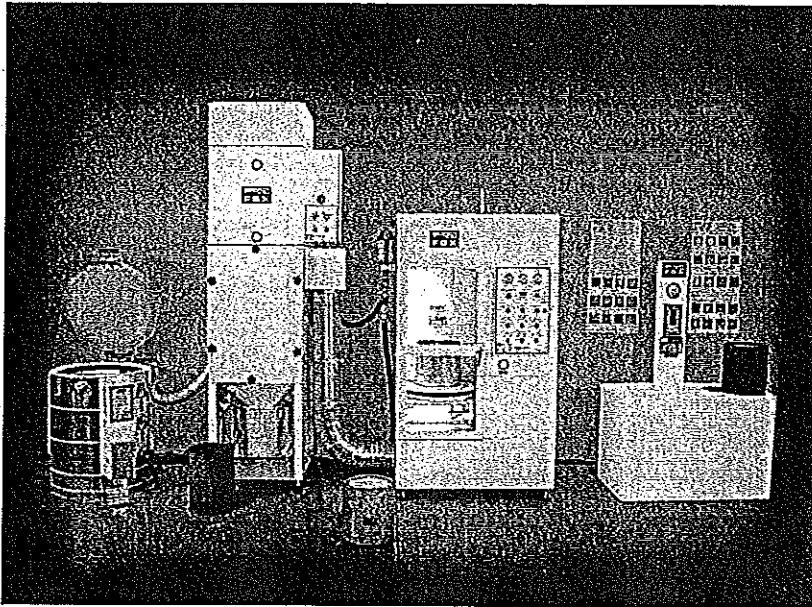
Diane Waldo  
President  
FSX Equipment Inc.  
360-691-2999  
[diane@fsxinc.com](mailto:diane@fsxinc.com)

### **3.2 Technical Qualifications**

#### **Task 1: PROVIDE A COMPLETE AND INTEGRATED DPF CLEANING SYSTEM**

##### **Task 1a. DPF Pneumatic Cleaning System**

##### **Task 1a.A. Level of Qualification**



FSX Equipment Inc. manufactures Diesel Particulate Filter (DPF) cleaning equipment and also provides DPF filter cleaning services using the machines we manufacture. FSX has been manufacturing dust collection and filter cleaning machinery since its inception in 1999 under the original sister company FSX Inc.

DPF filters first arrived at FSX in 2005 from Snohomish County Community Transit. FSX tried a wide variety of cleaning techniques using some existing machinery, technology used by other companies and manual cleaning procedures. Eventually we found a combination of one of our cleaning machines and a manual step that resulted in the best cleaning. The FSX pneumatic DPF cleaning machine, called the TrapBlaster, was built to automate the entire procedure. The machine was initially designed in 2005 and the first prototype completed in 2006. We released our cleaning systems to market early 2007 and since then have sold over 350 systems all over North America and some into Europe and Asia.

FSX equipment is recommended and distributed by the following major OEM's:

- Cummins Corporation
- Navistar Corporation
- Paccar Corporation (Kenworth & Peterbilt)
- Volvo Corporation (Volvo, Mack Truck, Renault Truck)

Since 2007 FSX has continued to grow our filter cleaning business. We have cleaned over 20,000 DPFs to date and we have kept data on every filter. The constant stream of

DPFs has allowed us to learn a great deal about how to maintain these expensive filters as well as help us continue to modify and improve our technology for the marketplace. Therefore, our cleaning machines have been thoroughly tested and tried internally.

In 2009, FSX entered into relationships with major OEM's to perform DPF reconditioning for filters that were taken back under warranty by the engine manufacturers. These programs require a much higher level of expertise and more sophisticated technical equipment.

Our experience with public municipalities is broad and extensive. Back in 2008, the Washington State Department of Ecology selected FSX as the DPF cleaner that would be installed into 6 transit authorities across the state to preserve the DPFs purchased with federal grant money to be retrofitted on buses in Washington State. As a part of this project, FSX successfully completed the installation of our equipment in all 6 transit authorities.

Since then, many transit authorities and other city, state and county government entities have demanded FSX cleaning systems by specifying FSX by name (or by characteristics) in request for quotations. Some of those noteworthy public municipalities are:

- City of Los Angeles
- New York City Department of Sanitation
- Chicago Transit Authority
- Houston Metropolitan Transit Authority
- Dallas Area Rapid Transit
- Utah Transit Authority
- Hillsborough Area Transit Authority (Tampa Bay)
- Maryland Transit Authority
- Southwestern Ohio Regional Transit Authority (Cincinnati)
- Via Metropolitan Transit (San Antonio)
- City of Phoenix
- County of Los Angeles
- Beaverton School District
- City of Portland
- Whatcom Transportation Authority

FSX cleaning requirements are very high. We cannot expect our customers to return unless they are very satisfied with the quality of the cleaning. Therefore we spent significant efforts toward finding the correct approach to cleaning the DPF filters.

FSX designed the DPF Pneumatic Cleaner for easy manufacturing and easy repair in the event repairs are needed. The cabinet and major components have been outsourced to companies that specialize. Final assembly is completed at FSX shops. Major components such as the entire electrical control box and the entire pneumatic control panel can be removed and reinstalled in the field within one hour.

We encourage you to review our website at [www.fsxinc.com](http://www.fsxinc.com). Here you will find more information and see the depth of our knowledge on cleaning DPFs and who have become our customers.

**Task 1a.B. DPF Pneumatic Cleaning System Performance**

**Pneumatic Cleaning Machine - TrapBlaster**

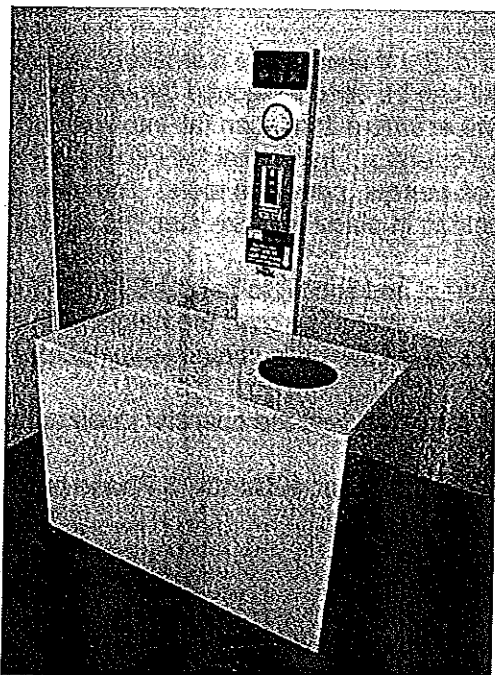


- 1) The FSX Pneumatic Cleaning Machine operates using high pressure continuous air flow that is delivered through a 1/4" diameter soft tip air nozzles to each DPF cell on both ends of the filter. The air delivery does not damage the filter according to testing done by two OEM's who have sent in test filters.
- 2) The machine delivers the air by scanning across the filter as it is rotating. This makes sure that each cell is addressed individually rather than trying to clean all the cells at the same time like the pulse machines do. The disadvantage of trying to process all of the cells at the same time is that once a few of the center cells have been cleared of ash the air pressure takes the path of least resistance through the clean cells and gives less attention to the cells that need cleaning the most.
- 3) The FSX machine has scanning capability on both ends of the filter. FSX found that blowing the filter from both ends rather than from one end releases more dust from the filter than if it is cleaned from just one end. This is a result of dust that has bridged in the cells part way down the cell. If you can get the dust moving one direction or the other the dust can be blown out. Best access to the dust is by blowing in the dirty end. This seems counterintuitive but works great. Filters cleaned from just one end usually have significant amounts of ash still in them.
- 4) Filters ranging from 4" to 36" in height can be cleaned on the machine by simply flipping a switch to set the height. The longest transit filters that we know of are 28.5" long. The FSX TrapBlaster has been proven to be safe with all types and sizes of DPF.
- 5) Filters ranging from 4" to 21" outside diameter can be cleaned in the machine by selecting the desired adapter plate from the adapter plate kit included with the machine and changing the electronic control switch.
- 6) The soft tip flexible nozzle (quick change) can be changed to allow angling of the nozzle under tapered flanges now standard on some DPFs. Tapered flange DPFs prohibit cleaning of the outer two to three inches of ceramic using most filter cleaning machines but are easily handled by the FSX cleaning machine with curved nozzle material.
- 7) The FSX pneumatic cleaning machine has automated cleaning that can be overridden by the machine operator. This allows the operator to walk away while the machine is cleaning but adjust the settings on the fly to see if he can get any more ash out of the filter with alternate settings on height and stroke.



- 8) The window in the front and the bright lights inside of the FSX machine allows the operator to see what is going on at all times and more importantly to see if dust is still coming out of the filter. If dust is still coming out let the machine continue to run. The FSX machine is not a black box. The operator knows what is happening.
- 9) The controls on the machine are clearly marked and easy to understand. The visibility through the window allows an operator to see the effect of adjusting any control.
- 10) DPF cleaning time will vary depending on loading and condition of the filter. Taller heavier loaded filters can take up to 45 minutes. Smaller lighter loaded filters may take 15 minutes. Rather than being locked into a set time the operator can look through the window to see if the cleaning has been completed. Dust exiting the filter is clearly visible.
- 11) The FSX machine helps the operator identify filters that have failed. If dust is exiting the filter the wrong way (out of the clean side) it is an indication that cell walls have failed in the filter. FSX and some OEMs have set the limit of failed cells at 25. If the filter has more than 25 the filter should be replaced.
- 12) It doesn't matter if you put the DPF filter in the cleaning machine upside down when using the FSX machine. While the preferred way is to have the dirty end down to take advantage of gravity we have found that installing the filter dirty side up works just as well. It might take a few minutes longer but other than that there is no consequence such as damaging the filter.
- 13) Ash from the DPF exits the cleaning machine via an 8" duct to be collected in a SootSucker dust collector.
- 14) The machine needs 120 CFM of compressed air at 100 psi with at least a 1.25" ID supply line. The air supply should have an air dryer installed to remove all water from the supply of air. A high quality refrigerant style air dryer is recommended as a minimum.
- 15) The electrical connection is 120 Volt, 1 ph, 15 amps. A standard plug in outlet is sufficient. The machine has an ETL/UL and CSA listing on the front control panel.
- 16) Loading height is a convenient 30" above ground level.

#### Flow Meter/Test Bench - TrapTester

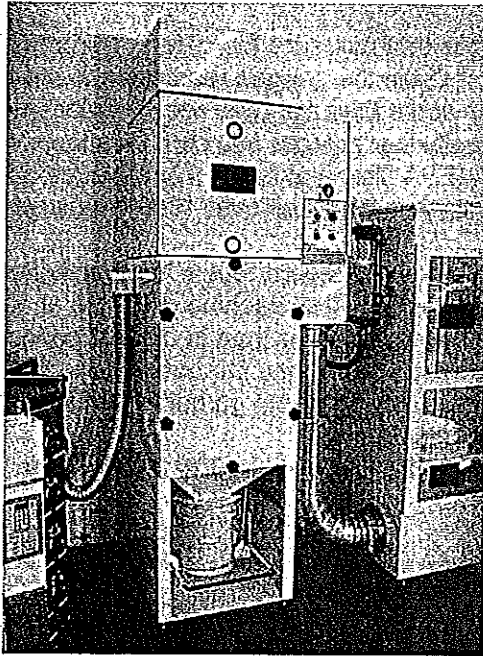


- 1) As part of the FSX DPF cleaning system, a machine called the TrapTester comes with the package. The TrapTester is a test flow bench that mimics a heavy duty diesel engine at high idle and gives you an accurate profile of how each DPF is performing as compared to a new DPF and what the recovery level is after the Stage 1 and Stage 2 cleaning.
- 2) FSX is the only manufacturer in the world to provide a commercially available separate test flow bench. This empowers

the end user to know the condition of the DPF and be able to track this data over multiple cleanings. It also determines whether a Stage 2 (thermal regeneration) is necessary. PACCAR engineers found that with the other equipment on the market, it is not possible to know whether the DPF is 56% clean or 98% clean because there is no way to measure the back pressure/flow across the DPF similar to it being on the truck or bus. The TrapTester fills this industry need and has become an industry standard with many truck and engine OEMs for measuring the breathability index and performance of each DPF.

- 3) The air flow test is performed by placing the clean side (outlet end) of the DPF down over the hole on the TrapTester and turning the switch. The pressure is measured by a gauge that is recorded by the operator on a filter cleaning history worksheet (provided in the manual). The measurement is compared to the baseline sheet by looking up the manufacturer name and then the part number. These baselines have been established using brand new DPFs of each part number. Based on years of data, FSX established performance ranges that will tell the operator what color classification the DPF falls in: Green Tag (excellent condition), Orange Tag (good condition) or Red Tag (out of specification). This will determine whether the DPF is ready to go back on the bus or if further cleaning is necessary.
- 4) FSX designed the TrapTester for easy manufacturing. It has few parts and the only moving part is a fan that is fully guarded. The cabinet and major components have been outsourced to companies that specialize in volume production. Final assembly is completed at FSX shops. Major components such as the entire electrical control box and the motor and fan assembly can be removed and reinstalled in the field within 30 minutes.
- 5) The TrapTester utilizes a blower with a selected fan curve to suck air down through an intake hole in the top surface of the test bench. The exhaust exits the test bench through a calibrated outlet. Filters should be placed on the test bench clean side down per the label on the front of the machine.
- 6) A key feature of the TrapTester is that it has no distortion in the air flow readings that can occur that is caused by having filters downstream. Filters located downstream from the fan that are in a closed system can distort air flow due to ever- changing amounts of dust loading.
- 7) The TrapTester has a flat work surface that provides the operators of the filter cleaning equipment a place to temporarily set several filters for visual inspection and pin gauging.
- 8) The test bench has an inlet diameter of 9". If filters have a smaller diameter an adapter plate from the TrapBlaster kit can be used to reduce the inlet hole.
- 9) The TrapTester has a drop box chamber where items can fall into without damaging the fan or endangering the operator. Items that fall into the drop box under the inlet hole are such things as pencils, pens and tools. They are easy to retrieve. The fan has full screens welded in place to make sure the operator cannot be injured.
- 10) The unit is fabricated using 12 gage steel and is built to handle 60 to 70 lb filters. The gage has been placed at eye level so that it is above the height of the filter and easy for the operator to see. The on/off switch is conveniently located on the mast.
- 11) The work surface is 30" above ground level so that the operator does not have to lift filters up any further than necessary.
- 12) The TrapTester comes in either 208, 220/240V or 460/480V 3 Phase per customer preference.

## Dust Recovery System with HEPA Filter – SootSucker 2



1) FSX has been manufacturing dust collectors since 1999 and selling them on the national market to companies such as Caterpillar, United States Postal Service, Genie Industries and Ford Motor. A variety of dust collector models have been built over the years. FSX has manufactured about 1000 dust collectors to date.

2) The SootSucker 2 was designed specifically for the DPF cleaning industry and where shop space is usually limited. This machine is a high performance dust collector that safely collects the ash and soot and deposits it in a 5 gallon pail for easy disposal. It has a two-stage filtration system

that goes through a HEPA filter that is 99.97% efficient at 0.3 Micron. Customers will need to check with their local regulations on how to dispose of the dry ash and soot that accumulates into throw away bucket.

- 3) Investigations by a number of OEM's have found that frequent replacement of paper filters is a major consumable cost on some DPF cleaning machines. The FSX SootSucker has by far the longest paper filter life. On the equipment quoted we have some customers that have cleaned over 500 DPF before the paper filter had to be changed. Most get about 300 cleanings per filter. This is due to the self-cleaning reverse pulse capability of the SootSucker that keeps the paper filter clean longer.
- 4) FSX out sources the fabrication of the metal cabinets used in the dust collectors and purchases major components from reliable vendors. Final assembly takes place in the FSX shops. Components and the design have been proven and enhanced over the years.
- 5) FSX has learned through experience the art and science of matching the fume/dust collector to the application. The collection capability of a dust collector is a function of the fan cubic feet per minute, inches of pressure the fan can generate measured in water gauge, the square footage of filter media used and the type of filter media used. This basic capability must be matched with the amount of incoming dust, type of dust and the amount of air that has to be collected in order to capture all of the dust. The amount, size and configuration of the duct will also have an impact on the quality of the dust collection. To a layman a dust collection system seems simple. The reality is far from simple. A layman will often undersize the dust collection system or mis-configure the

system with the end result being an inadequate capture and dust in the work environment.

- 6) The SootSucker 2 has two filter gauges that measure the differential pressure of the both the primary and HEPA filters. Once the gauges read close to the limit and the self-cleaning pulse no longer works then the filter needs replacement. As noted above the primary filter will usually last at least 300 DPF cleanings. We have not yet realized the limit of the HEPA filter and have only replaced a few due to this point. We anticipate the HEPA lasting well over 1000 cleanings.
- 7) Operation of the machine is via a simple on/off switch that is hand activated. The internal programs handle the cleaning cycles. The machine operates at one speed so there are no other steps to operate it other than to clean it periodically. Dust collectors are glorified garbage cans. Once they are balanced to the application about all they need is daily emptying of the garbage can located underneath and an occasional filter cleaning.
- 8) The SootSucker comes in either 208, 220/240V or 460/480V 3 phase per customer preference.

#### **Task 1a.C. Ability to meet Schedule**

FSX can currently produce 6 full sets of equipment per week and our lead time is only 3 weeks from the order to the time of shipping. During busy times our lead times vary between 3 and 7 weeks. We do not anticipate any delivery problems.

#### **Task 1a.D Customer Service Support**

A hands on and class room training session would be conducted at each location under the contract to make sure operators are familiar with the operation of the machinery and to make sure the operators and the managers are aware of the procedures to properly clean the filters, what to look in order to identify defective filters and to identify filters that need special procedures. The training would be conducted by an FSX employee who has had extensive hands on operating experience that has been in the trenches cleaning DPF filters.

FSX training courses include a three ring binder that document the installation, operation and maintenance of the machines along with filter cleaning procedures complete with pictures of filter characteristics.

A DVD showing the use of the FSX DPF cleaning equipment is included in the three ring binder to help train future employees.

If the FSX Pneumatic Cleaning machine fails or needs repair, FSX will supply replacement parts via UPS next day if needed. The machine is made with two major components that are interchangeable and have quick removal built into them. These two major components are the entire electronic control box and the bolt-on back panel that has all of the pneumatic valves. These two components contain about 80% of the critical parts and both can be changed out within one hour. That allows the machine to be brought back on line very quickly. The remaining 20% of the components are readily available parts.

Upgrades to the equipment may be available if necessary. The machines have been modified many times since their initial design but there has been very little change in the last couple years due to the reliability and ease of use. FSX has built the machine so that most of the major components that would be involved in anticipated upgrades are easy to replace.

**Task 1a.E Warranty**

FSX offers a standard 1 year warranty that the equipment will be free of defects in materials and workmanship and that the machine will properly operate under normal filter cleaning operations. The warranty covers cost of replacement materials supplied by FSX (not by others) and labor by FSX \*if necessary. Labor by others is not covered. The warranty does not cover damage to the equipment due to inappropriate use or external damage. The warranty does not include coverage for alternative expenses incurred to clean filters while the machine is out of operation.

\*FSX will work with the customer over the phone to quickly resolve the problem and get the machine back up and operating within a reasonable time period. Most warranty circumstances are resolved by sending a part overnight by UPS and assisting the customer over the phone to swap it out. FSX will travel to the location in the rare event that the problem cannot be resolved in the above way first.

**Task 1a.F References for FSX DPF Pneumatic Cleaning Machine**

Alan Treasure  
PACCAR Parts  
Senior Product Director  
(425)254-4066

Tom Hoffmeister  
Navistar, Inc.  
Product Manager  
(630)753-6393

Todd Wieland  
Cummins Corporation  
Director of Engineering – Recon  
(812)377-3892

Jeff Irr  
Volvo Trucks North America  
Remanufactured Development Marketing Manager  
(336)393-2091

Ron Pharr  
Peterbilt of Fort Smith  
Service Manager  
(479)632-9140

Kirk Barnhard  
MHC Kenworth  
Training and Development Manager - Service  
(800)766-7035

Dave Schaer  
O'Halloran International Trucks  
Service Manager  
(515)967-1145

**Cost Proposal** – See Exhibit C

## **Task 1b. DPF Thermal Regeneration System**

### **Task 1b.A Technical Qualification**

- 1) FSX has been thermally processing DPF filters since 2005 when filters were first received from Snohomish County Community Transit. Before FSX conducted the first thermal regenerations extensive research was done to make sure the filters would not be damaged by the process. The research started with internet investigations to determine the current technology being used by others and moved on to scientific research reports, contacting companies involved in manufacturing ceramic compounds and looking at published procedures from OEM's as available.
- 2) Little information was available at the time other than some research papers that gave some clues. FSX discovered that what you want to avoid is rapid temperature differentials that can cause cracking or uncontrolled regenerations that are typically caused by excess hydrocarbons still in the filter when it was being baked.
- 3) By investigation FSX found that the ideal temperature to thermally process cordierite filters and silicon carbide filters is 1112F (600C). Armed with the temperature information and a basic knowledge that things break if heated or cooled too quickly and that fires have three legs: heat, fuel and oxygen, FSX proceeded cautiously into the arena of thermally processing DPF. Our primary principle was to avoid destroying any filters that cost our customers \$4500.00 to \$6800.00.
- 4) FSX has now processed over 10,000 filters thermally without cracking a single filter or having an uncontrolled regeneration.

### **Task 1.b.B DPF Thermal Regeneration System Performance**



- 1) The FSX DPF cleaning system includes the TrapBurner for Stage 2 thermal regeneration of DPF's when necessary. This process will burn out any remaining soot by carefully ramping up temperature and soaking at pre-programmed temperatures to prevent damage to the catalyzed washcoat and/or cracking. After a Stage 2 cleaning, the DPF will go back into the TrapBlaster to blow-out any ash that has been loosened as a result of the remaining soot being burned out.
- 2) The TrapBurner uses a conservative approach to avoid cracking by using a programmed slow ramp up of heat in a stair step pattern. Once the optimum

- temperature is reached it is held for several hours and then slowly brought back down to avoid any thermal shock.
- 3) The machine follows the selected program and displays the internal temperature and elapsed time. When the program is completed the kiln is allowed to self cool until it reaches 500F at which point the lid can be opened for more rapid cooling.
  - 4) FSX does not recommend processing oil soaked or coolant soaked DPF. Fluid soaked DPF should be sent to FSX for processing.
  - 5) The complete cycle time on Program 1 is completed in 9 hours but with some additional cool down you should figure a 12 hour cycle time overall.
  - 6) One filter at a time can be processed in the kiln offered in this contract. However, extension rings can be purchased at a later date to increase the number of DPFs processed simultaneously. The TrapBurner can process up to 3 standard size DPFs (no longer than 17") with both extension rings and a filter rack kit. The DPFs sit down lengthwise on top of each other inside a rack. In the case of a DPF being longer than 17", only one DPF will fit in vertically up to 24" long under this contract or up to 40" long with both optional extension rings.
  - 7) FSX has found that about 1 out of every 5 filters will need thermal cleaning if the filter is properly cleaned with a pneumatic cleaner. FSX does not recommend conducting any more thermal regenerations than necessary.
  - 8) The TrapBurner uses radiant heat rather than the pumped convection air heating process of traditional industrial ovens. When air is pumped into the heat chamber it can provide enough oxygen inside the DPF to cause an uncontrolled thermal regeneration. By depriving the filter of an air supply you have knocked out one of the three legs of a fire. With little oxygen available a more controlled burn of the remaining hydrocarbons is obtained.
  - 9) The FSX thermal regeneration process dictates that no filter will be thermally regenerated unless it has first gone through a thorough pneumatic cleaning. Excess hydrocarbons in the filter increase the probability of an uncontrolled regeneration. The only exception to this rule is when a filter is visibly wet with oil.
  - 10) Aside from the three one-touch programs, the TrapBurner has the capability to be custom programmed if the need arises.
  - 11) The TrapBurner is connected to the SootSucker 2 dust collector via a small 3" flexible duct. This is mainly used in air quality control areas where strict regulations would require it. With the dust collector turned on, it pulls a slight negative pressure on the TrapBurner in case there is any dust from the oxidizing of the soot. We have no evidence of any dust escaping from the kiln. The soot will oxidize to a gas when heated to 1100F. Even though this is available, it is not practical to run the SootSucker for 9 hours while the TrapBurner is thermally processing a DPF unless local regulations require it.
  - 12) The FSX Thermal Cleaner is a standard industrial brick kiln with a stainless steel exterior. A Programmable Logic Controller (PLC) has been added that contains the FSX thermal programs. The kiln is purchased with the special PLC from a reputable supplier. FSX pre-fires the TrapBurner and tests the programs prior to shipping.
  - 13) The top lip of the kiln is 27" above ground level for convenient loading.
  - 14) The TrapBurner comes in either 208, 220/240V or 460/480V 3 phase per customer preference.

**Task 1b.C. Ability to meet Schedule**

FSX can currently produce 6 full sets of equipment per week and our lead time is only 3 weeks from the order to the time of shipping. During busy times our lead times vary between 3 and 7 weeks. We do not anticipate any delivery problems.

**Task 1b.D Customer Service Support**

A hands on and class room training session would be conducted at each location under the contract to make sure operators are familiar with the operation of the machinery and to make sure the operators and the managers are aware of the procedures to properly clean the filters, what to look in order to identify defective filters and to identify filters that need special procedures. The training would be conducted by an FSX employee who has had extensive hands on operating experience that has been in the trenches cleaning DPF filters.

FSX training courses include a three ring binder that document the installation, operation and maintenance of the machines along with filter cleaning procedures complete with pictures of filter characteristics.

A DVD showing the use of the FSX DPF cleaning equipment is included in the three ring binder to help train future employees.

If the FSX Pneumatic Cleaning machine fails or needs repair, FSX will supply replacement parts via UPS next day if needed. The machine is made with two major components that are interchangeable and have quick removal built into them. These two major components are the entire electronic control box and the bolt-on back panel that has all of the pneumatic valves. These two components contain about 80% of the critical parts and both can be changed out within one hour. That allows the machine to be brought back on line very quickly. The remaining 20% of the components are readily available parts.

Upgrades to the equipment may be available if necessary. The machines have been modified many times since their initial design but there has been very little change in the last couple years due to the reliability and ease of use. FSX has built the machine so that most of the major components that would be involved in anticipated upgrades are easy to replace.

**Task 1b.E Warranty**

FSX offers a standard 1 year warranty that the equipment will be free of defects in materials and workmanship and that the machine will properly operate under normal filter cleaning operations. The warranty covers cost of replacement materials supplied by FSX (not by others) and labor by FSX \*if necessary. Labor by others is not covered. The warranty does not cover damage to the equipment due to inappropriate use or external damage. The warranty does not include coverage for alternative expenses incurred to clean filters while the machine is out of operation.

\*FSX will work with the customer over the phone to quickly resolve the problem and get the machine back up and operating within a reasonable time period. Most warranty circumstances are resolved by sending a part overnight by UPS and assisting the customer over the phone to swap it out. FSX will travel to the location in the rare event that the problem cannot be resolved in the above way first.

**Task 1b.F References for FSX DPF Pneumatic Cleaning Machine**

Alan Treasure  
PACCAR Parts  
Senior Product Director  
(425)254-4066



FSX Equipment Inc. – DPF Filter Cleaning Equipment & Services – Bid Proposal  
State of Washington Department of Ecology RFQQ # ECY1204 AQP

Tom Hoffmeister  
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Dave Schaer  
O'Halloran International Trucks  
Service Manager  
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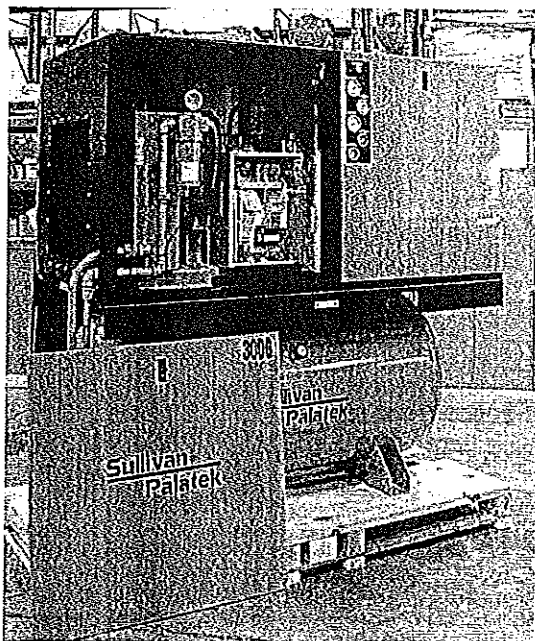
Cost Proposal – See Exhibit C

## **Task 2. Air Compressor/Air Dryer System (Optional Purchase)**

### **Task 2. A Level of Qualification**

- 1) FSX is an authorized Sullivan Palatek distributor and has been selling turn-key air compressors with the DPF cleaning system to customers for over 3 years.
- 2) Sullivan Palatek compressors are not manufactured by FSX but by Sullivan Palatek out of Michigan City, Indiana. We have used these compressors and have found their quality to be second to none.
- 3) Because of volume sales, FSX receives discounts on these compressors and provides them for purchase to our customers as a service.
- 4) FSX has sold over 50 air compressors to date.

### **Task 2. B Air Compressor/Air Dryer System Performance**



- 1) The 30 HP Sullivan Palatek air compressor is a rotary screw compressor that is built specifically for the FSX TrapBlaster. The custom compressor comes with a built-in desiccant air dryer and filtration system and mounted on a 120 gallon air receiver tank to reduce the footprint. It also comes standard with a sound enclosure to reduce the noise from 82 decibels to 78 decibels. (FSX Part# 79-10A102-wse (460V) or #79-10A103-wse (230V), FSX Part# 79-10A104-wse (208V)
- 2) This compressor exceeds the 120 CFM at 100 PSI TrapBlaster air requirements.
- 3) The customer must install 1.25" minimum I.D. air pipe from the compressor to the TrapBlaster in order to carry the volume of air required and to mitigate the 90 degree turns. We recommend placing the compressor no longer than 100 feet from the TrapBlaster and seek to minimize the number of 90 degree turns.

### **Task 2. C Ability to Meet Schedule**

The compressors are manufactured and shipped from Michigan City, IN. Lead time is usually four to five weeks on 220V and 460V and four to six weeks for 208V compressors.

### **Task 2. D Customer Service Support**

Sullivan Palatek handles all service and technical support calls for their compressors. They have been very responsive and we have not had any complaints from our

customers. Sullivan Palatek has authorized service technicians all over the country in most major and mid-size cities.

### **Task 2. E Warranty**

It is highly recommended to have an authorized technician come out to the customer location to perform the initial start-up sequence for warranty purposes. They will be the same people to contact for warranty support and service.

The following is Sullivan Palatek's warranty:

## **2008 Sullivan-Palatek**

### **Warranty**

#### **New Industrial Compressors - 15 and greater Horsepower**

Sullivan-Palatek warrants its new stationary industrial air compressor products to be free from defects in material and workmanship and against loss of capacity due to wear, subject to the following provisions:

**Warranty Registration:** The purchaser shall complete and return the warranty registration form within 10 days of start-up to validate the warranty. Failure to submit the warranty registration will cause the warranty effective date to be the Sullivan-Palatek ship date.

**Warranty Period:** The warranty period for applicable Sullivan-Palatek products is as follows (subject to the Exclusions and Limitations noted below):

- **Total Package:** 12 months (1 year) from the date of start-up by authorized distributor or 18 months from date of shipment by Sullivan-Palatek, whichever expires first.
- **Compressor unit and Coupling Assembly:** 24 months (2 years) from the date of start-up by authorized distributor or 30 months from date of shipment by Sullivan-Palatek, whichever expires first.
- **Compressor Motor:** 24 months (2 years) from the date of shipment by Sullivan-Palatek.
- **Compressor Shaft Seal:** Warranted for 12 months (1 year) from date of start-up or 18 months from date of shipment by Sullivan-Palatek, whichever expires first.
- **Components not manufactured by Sullivan-Palatek:** Sullivan-Palatek's warranty obligation with regard to equipment and components not of its own manufacture is limited to the warranty actually extended to the company by its supplier.
- **Oil Leaks:** Oil leaks will be covered under warranty for a period of 60 days from start up, but not longer than 90 days after shipment from Sullivan-Palatek. These are defined as an escape of air or oil that only requires tightening to stop the leak. Other leaks are considered a failure of sealant or application thereof, or a part or assembly error and are covered for one year due to defects in workmanship, or to the limit of the manufacturer's warranty.

**Warranty replacement parts:** Remainder of the original warranty period for the replaced part.

**Sullivan-Palatek's Obligations:** Sullivan-Palatek's exclusive obligations with respect to breach of warranty are (i) to repair or replace (at Sullivan-Palatek option and subject to return of defective parts) any defective part, (ii) to pay the reasonable cost of making the repair, or installing the replacement part, except the motor after the first year, (iii) to pay ground freight for the return of defective parts and shipment of replacement parts.

**Customer Responsibility:** As a condition to Sullivan-Palatek's obligations under this warranty, customer shall; (i) give Sullivan-Palatek written notice of warrantable failure of the Sullivan-Palatek product within the applicable warranty period, (ii) make the product available for repair; (iii) return defective parts to Sullivan-Palatek; (iv) pay reasonable travel expenses for field repairs performed at customer's request, (v) pay the costs of investigating performance complaints that are not covered by this warranty; and (vi) pay costs of air freight or other expedited delivery made at customer's request.

**Exclusions and Limitations:** Disassembly of the air compressor unit will void this warranty and the unit exchange policy. Sullivan-Palatek has no obligation for product failures or defects resulting from overload, misuse, neglect, accident, failure to comply with Sullivan-Palatek's product manual or failure to install product improvements provided by Sullivan-Palatek Attachment of accessories or service parts not supplied or recommended by Sullivan-Palatek may void the warranty of the product.

**THIS WARRANTY IS SULLIVAN-PALATEK'S ONLY WARRANTY OF ITS STATIONARY INDUSTRIAL AIR COMPRESSOR PRODUCTS AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED. ANY IMPLIED WARRANTIES OF MERCHANTABILITY, STATUTORY OR OF FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SULLIVAN-PALATEK HAS NO OBLIGATION UNDER THIS WARRANTY OR OTHERWISE (REGARDLESS OF THE FORM OF ACTION) FOR SPECIAL, INDIRECT, CONSEQUENTIAL OR INCIDENTAL DAMAGES OF ANY CHARTER, INCLUDING WITHOUT LIMITATION, LOSS OF USE OF PRODUCTIVE FACILITIES OR EQUIPMENT LOST PROFITS, LOST INCOME, PROPERTY DAMAGE, EXPENSES INCURRED IN RELIANCE ON THE PERFORMANCE OF SULLIVAN PALATEK WHETHER SUFFERED BY THE BUYER OR ANY THIRD PARTY. THE TOTAL RESPONSIBILITY OF SULLIVAN PALATEK FOR CLAIMS, LOSSES, LIABILITIES OR DAMAGES, WHETHER IN CONTRACT OR TORT ARISING OUT OF OR RELATED TO ITS PRODUCTS SHALL NOT EXCEED THE PURCHASE PRICE.**

FSX Equipment Inc. – DPF Filter Cleaning Equipment & Services – Bid Proposal  
State of Washington Department of Ecology RFQQ # ECY1204 AQP

This warranty applies to all Sullivan-Palatek stationary industrial air compressors of 15 horsepower or greater shipped after January 1, 2008 superseding previous warranty policies, except to the extent expressly superseded by a later warranty. In the event of any conflict between this warranty and earlier warranty statements, the terms of this warranty will control.

**Task 2.F References for the Air Compressor**

Monica Puetthoff  
Martha's Vineyard Transit  
Shop Manager  
(508)693-9440

Mark Johansen  
Chicago Transit Authority  
Foreman  
(773)874-7100 x7377

Bud Bankston  
Kern High School District  
Maintenance Manager  
(661)827-3199

**Cost Proposal** – See Exhibit C

### **Task 3 DPF Cleaning/Regeneration Service - Pneumatic Cleaning and Thermal Regeneration**

#### **Technical Qualifications**

##### **Task 3 Section A** **Level of Qualification**

FSX has provided professional filter cleaning services in the State of Washington since its inception in 1999. The original customers were primarily in the aerospace industry.

FSX first started cleaning DPF and DOC in 2005 for Community Transit, King County Metro and several other northwest transit authorities including Kitsap Transit, Island Transit and Skagit Transit. FSX cleans approximately 1500 DPF per year for local customers.

After developing the DPF cleaning equipment and offering it for sale FSX began to develop close relationships with very large OEM's. Working with the OEM's provides ongoing updates and development of filter cleaning technology and refinement of the testing procedures to identify defects in the DPF. FSX provides extensive filter cleaning services for Cummins Corporation and Isuzu Corporation. During the past 12 months FSX has cleaned around 11000 filters under OEM remanufacturing/reconditioning contracts making us one of the largest DPF cleaners in North America.

During the last 24 months FSX has also provided DPF cleaning services for Ford Motor Company, John Deere, EMD (locomotive filters), General Electric Transportation (locomotives), Komatsu, LBX, Sumitomo, and Kubota. In addition we have provided ongoing advisory services for cleaning DPF for Volvo, Renault Truck, Navistar, Kenworth and Peterbilt dealers equipped with our machines.

FSX has provided excellent service to our customers and has an impeccable record.

##### **Task 3 Section B** **DPF Cleaning/Regeneration System Performance**

The FSX cleaning system and process provides the most comprehensive cleaning available in North America.

The FSX pneumatic cleaning device uses bi-directional cleaning technology that cleans the filter from both ends rather than from just one end. Testing by Paccar Corporation has proven that by working the filter from both ends, 9% more ash is removed from the DPF than if the filter is just blown from one end. Notice we said ASH. 100% of the SOOT is removed using the combined FSX pneumatic and thermal regeneration process. Ash removal is the important measure. FSX focuses on ash removal percentage knowing that

Ash damages DPF over the long term if it is left in the cells because it will harden over time and sinter to the cell wall according to an MIT study by Alexander Sappok. Ash can instigate cracks and it is important to remove as much as possible.

When pneumatically blowing ash and soot out of a filter it is important to be able to see the ash and soot coming out. That way you know when the filter is clean. On the FSX TrapBlaster you can see the entire cleaning function on both the inlet and outlet ends of the filter. When you stop seeing ash and soot coming out of the filter you know the pneumatic cleaning is finished. The design of some cleaning devices makes it impossible to see the outlet end of the DPF and you do not know if the pneumatic cleaning process is done. On the FSX TrapBlaster the operator has a complete view of the cleaning action.

FSX thermal regeneration using the FSX TrapBurner bakes the filter using OEM approved ramp rates and holding times at approved temperatures. The FSX thermal regeneration assures complete oxidation of soot without subjecting the filter to unacceptable temperature gradients.

When filters are cleaned at FSX the following testing and inspection methods are used:

- Air Flow Testing measures back pressure and compares the result with baselines for each filter when it was new. Cleaning results from air flow testing are plotted on a bell curve to establish norms.
- Pin Gauging – 28 cells are pinned on both ends of the filter to find ash plug height and evidence of melting or cracking.
- Bypass inspection – 2 minute process finds cracks and breached cells
- Visual inspection for cracks, gouges, can dents, bent flanges
- Boroscope cell review – 21 cells checked for cracks when needed
- Ultrasonic crack detection – 21 point checks for cracks when needed

FSX also conducts catalytic performance testing if needed to determine if washcoats containing precious metals are performing as designed.

The FSX equipment and cleaning process has been thoroughly tested by engineering teams from numerous OEM's and is actively being used by nearly every OEM in North America.

Another advantage of the FSX system and process is that it is a complete process and complete service. Following is a description of the service:

- 17) FSX picks up the DPF filters at the customer's location using an FSX delivery truck or other means of transportation. If distances are more than 60 miles FSX may impose a minimum quantity requirement.
- 18) When the filters are received they are recorded by customer name and serial number.
- 19) Inspection #1 is then conducted where a visual inspection is made looking for evident defects or damage. If no serious defects are found the filter proceeds to air flow testing and pin gauging to determine the level of plugging and to see if there is evidence of internal damage. The filter characteristics are recorded on an FSX data input document. All defects and test results are carefully recorded and stored in the database.
- 20) If certain repairable defects are discovered they are repaired within proven parameters. These repairs may include a limited number of black holes, bent rims,

- broken welds, minor cracks. There is an up charge for the added services and customer approval is required before we proceed with needed repairs.
- 21) The filter is cleaned using the FSX TrapBlaster Pneumatic Cleaning Machine. The cycle time can range from 15 minutes to 45 minutes depending on filter loading. During the first 2 minutes of the cleaning process the operator watches for bypass found by the FSX bi-directional scanning feature unique to the FSX TrapBlaster. This diagnostic tool will find hidden damage such as breached cell walls and horizontally cracks that cannot be found with just a visual inspection. Evidence of internal damage will show up as ash or soot coming out the wrong way.
  - 22) After the pneumatic cleaning the DPF is tested for air flow (backpressure simulation) a second time to see if it falls within the baseline cleaning range. The air flow reading is recorded to the serial number. The filter is also pin gauged in 21 places to determine if the ash plugs have been removed.
  - 23) If the filter has fallen into the accepted cleaning range (Green Tag) on air flow and the ash plugs are gone the cleaning process is stopped and the filter is repackaged for the customer and marked with a Green Tag meaning it recovered as expected.
  - 24) FSX developed industry wide cleaning standards and we use these standards on every filter we clean. Cleaned filters are classified as Green Tag, Orange Tag or, Red Tag depending on the success of the cleaning in relation to baselines and bell curves established for each DPF by part number. The FSX measuring system establishes baseline performance specifications from new filters and then compares the cleaning results with the norms for that filter. Green Tag means that the cleaned filter meets the cleaning parameters and is in good condition. Orange tag means that the filter cleaned up but is only meeting the lower end of the cleaning parameters. The higher pressure readings associated with Orange Tag may mean that the filter has some permanent damage from operations. The damage is often sintering or glazing of the cell wells with metal contained in the ash. While an Orange Tag filter is useable the service life will typically be shorter. With expensive DPF filters you do not want to throw them away unless you have all the use out of it that you can get. Red Tag means that the filter did not clean up into useable operating range according to FSX specifications. The filter may have partially cleaned up enough to be useable but the service life will be very short. FSX has only a partial charge if the filter stays in the Red Tag zone.
  - 25) FSX automatically moves filters that have been pneumatically cleaned but are in the Orange Tag or Red Tag ranges into a thermal cleaning to see if a thermal regeneration will cause the filter to come down into the Green Tag range. After the thermal regeneration has occurred the filter is cleaned a second time in the pneumatic cleaning machine. The second cleaning on the pneumatic cleaning machine blows out any remaining ash after the hydrocarbons have been burned off.
  - 26) Ultrasonic testing and borescope review are conducted to verify the presence or absence of cracks, melts or cell wall failure.

**Task 3 Section C**  
**Ability to Meet Schedule.**

Turnaround time in the FSX facility is typically 1 to 2 days depending on volume. The filter is generally back to the customer on the 3rd work day from day of pickup depending on location and customer needs. If a customer has a machine down and is in desperate need we will do filters same day or next day depending on location.

FSX has 6 pneumatic cleaning machines and 13 thermal cleaners in place providing plenty of redundancy.

**Task 3 Section D**  
**Customer Service**

FSX provides the following customer service:

1. Free pick-up and delivery within 60 miles of Granite Falls, WA
2. Individual data sheet for each filter showing findings on approximately 100 attributes is available in hard copy or electronic copy.
3. Database compilation of all filters cleaned on approximately 100 attributes per cleaning is available in hard copy or electronic copy.
4. Analytical consulting on the overall performance of your fleet of DPF. We help you find norms and identify problems at no charge.
5. Specialized services are available such as catalytic performance testing.
6. DPF and DOC recycling services. We will purchase defective or damaged DPF at market rates and recycle them to recover precious metals.
7. Other services available:
  - a. Catalytic performance testing to see if wash coats are poisoned
  - b. Specialized cleaning services for unusual DPF
  - c. Stage 3 cleaning (proprietary) can salvage some very plugged DPF

**Task 3 Section E**  
**Warranty**

FSX provides a warranty on our filter cleaning service in two ways.

1. First, a nominal charge is made in the event that a filter is Red Tagged and cannot be recovered into at least the Orange Tag status. No one likes to pay for something when they did not get a product at the end of the service. The nominal charge is to recover expended hard costs that FSX incurred.
2. Second, FSX will re-clean any filter that the customer is dissatisfied with at no cost for the second cleaning. The customer will be required to pay shipping costs if applicable. FSX strives to provide excellent service and wants to make sure the customer is happy. FSX makes no warranties or claims as to the ability to successfully clean a filter. Some filters can look good on the surface but cannot be recovered due to some type of internal damage. FSX has no control over the operating conditions under which the DPF or DOC is used and cannot offer an operating warranty. A new or freshly cleaned DPF in good operating condition can quickly re-plug if it is placed into service on a diesel engine that has coolant problems, injector issues, oil bypass, under temperature or a myriad of other problems that can overload the performance capability of the DPF.

**Task 3 Section E**  
**References**

King County Metro, Brian Knesal, (206)684-2201  
[brian.knesal@kingcounty.gov](mailto:brian.knesal@kingcounty.gov)

Service: DPF cleaning



1220 East Marginal Way South  
Seattle, WA 98168-2572

Skagit Transit, Al Schaner (360)757-8801  
[aschaner@skagittransit.org](mailto:aschaner@skagittransit.org)  
600 County Shop Lane  
Burlington, WA 98233-3118

Service: DPF Cleaning

First Transit, Thomas Hieb (425)355-3755 Ext #217  
[thomas.hieb@firstgroup.com](mailto:thomas.hieb@firstgroup.com)  
2300 Kasch Park Road  
Everett, WA 98204

Service: DPF Cleaning

### **Section 3.3 BUSINESS QUALIFICATIONS (MANDATORY)**

#### **Section 3.3 A. References**

King County Metro, Brian Knesal, (206)684-2201  
[brian.knesal@kingcounty.gov](mailto:brian.knesal@kingcounty.gov)  
1220 East Marginal Way South  
Seattle, WA 98168-2572

Contracted DPF cleaning services

Ford Motor Company  
John Shore  
313 390-1241 (Office)  
248 935-4408 (cell)  
[jshore@ford.com](mailto:jshore@ford.com)  
Buyer - Chassis Purchasing  
Ford Customer Service Division  
Regent Court - 3S137

Pilot program on DPF reconditioning services

Isuzu Of North America  
Tony Page  
(714)935-9483  
[Tony.Page@icta-us.com](mailto:Tony.Page@icta-us.com)  
1400 S. Douglass Rd.  
Anaheim, CA 92806-6906

DPF remanufacturing/reconditioning services

#### **Other Business References**

<u>Organization</u>	<u>Contract No.</u>	<u>Period of Performance</u>	<u>Contact Persons</u>	<u>Telephone/Fax Nos.</u> <u>E-mail Addresses</u>
United States Postal Service – Mail Recovery Ctr.	3BMHRD-04-F-4507	May-July, 2004	Lydia D. Jaramillo USPS	(202)268-2260 (202 268-2304 (Fax) <a href="mailto:Lydia.d.jaramillo@usps.gov">Lydia.d.jaramillo@usps.gov</a>

FSX Equipment Inc. – DPF Filter Cleaning Equipment & Services – Bid Proposal  
State of Washington Department of Ecology RFQQ # ECY1204 AQP

United States Army/ General Dynamics – Stryker Nat'l Repair Ctr.	GS-10P-06-XA -3020, ACT No. PN6LA0236	4/14/06 - 6/01/06	Dan Peterson, GSA	(253) 931-7423 (206) 220-5068 <a href="mailto:dan.peterson@gsa.gov">dan.peterson@gsa.gov</a>
			Erik K. Torkelson, General Dynamics	(253) 931-7625 (253) 804-4846 (Fax) <a href="mailto:torkel@gdls.com">torkel@gdls.com</a>
Washington Dept of Ecology	AQECY-0813	2/1/08–1/31/09	Mike Boyer	(360) 407-6863 <a href="mailto:mboyer@ecy.wa.gov">mboyer@ecy.wa.gov</a>

### Section 3.3 B. Past Contracts

1. None. FSX has not had any contracts with the State of Washington during the last 24 months. We do not use subcontractors.
2. None. No FSX employees are or have been an employee of the State of Washington in the last 24 months. We do not use subcontractors
3. None. FSX has not had a contract terminated for default in the last 5 years
4. None. FSX has not had any defaults on a contract

### Section 3.4 OMWBE CERTIFICATION

FSX is woman owned but not yet certified.

### Section 3.5 COST PROPOSAL

See Exhibit C

EXHIBIT A – CERTIFICATIONS AND ASSURANCES

I/we make the following certifications and assurances as a required element of the proposal to which it is attached, understanding that the truthfulness of the facts affirmed here and the continuing compliance with these requirements are conditions precedent to the award or continuation of the related contract(s):

1. I/we declare that all answers and statements made in the proposal are true and correct.
2. The prices and/or cost data have been determined independently, without consultation, communication, or agreement with others for the purpose of restricting competition. However, I/we may freely join with other persons or organizations for the purpose of presenting a single proposal.
3. The attached proposal is a firm offer for a period of 60 days following receipt, and it may be accepted by Ecology without further negotiation (except where obviously required by lack of certainty in key terms) at any time within the 60-day period.
4. In preparing this proposal, I/we have not been assisted by any current or former employee of the state of Washington whose duties relate (or did relate) to this proposal or prospective contract, and who was assisting in other than his or her official, public capacity. (Any exceptions to these assurances are described in full detail on a separate page and attached to this document.)
5. I/we understand that Ecology will not reimburse me/us for any costs incurred in the preparation of this proposal. All proposals become the property of Ecology, and I/we claim no proprietary right to the ideas, writings, items, or samples, unless so stated in this proposal.
6. Unless otherwise required by law, the prices and/or cost data which have been submitted have not been knowingly disclosed by the Bidder and will not knowingly be disclosed by him/her prior to opening, directly or indirectly to any other Bidder or to any competitor.
7. I/we agree that submission of the attached proposal constitutes acceptance of the solicitation contents and the attached sample contract and general terms and conditions. If there are any exceptions to these terms, I/we have described those exceptions in detail on a page attached to this document.
8. No attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.
9. I/we grant Ecology the right to contact references and others, who may have pertinent information regarding the Bidder's prior experience and ability to perform the services contemplated in this procurement.

On behalf of the firm submitting this proposal, my name below attests to the accuracy of the above statements.

Signature of Bidder

Title

Date

**FSX Equipment Inc.**

**EXHIBIT C -- COST PROPOSAL**  
Use this form for submitting your cost proposal.

**ACQUISITION OF DIESEL PARTICULATE FILTER (DPF) CLEANING SYSTEM**

Provide prices for this contract as follows:

Provide items at fixed unit prices, including all labor, equipment and materials required for delivery and set up, as well as project management, training (five to twenty employees) as needed, customer service to include service if system fails, system/machine upgrades, user manuals, etc.

Note that only the starred (\*\*\*) cost quotes for each task or sub task will be used in the scoring of your proposal. The score for your starred cost quote will be computed by dividing the lowest bid amount received by your bid amount. The resultant number then will be multiplied by the points possible.

**Task 1: Provide a complete and integrated DPF cleaning system**

**Task 1a: Provide DPF Pneumatic Cleaning System that Includes:**

- Pneumatic cleaning machine;
- Flow meter/test bench;
- Dust recovery system with HEPA Filter;
- All inlets, outlet, and connective ductwork and other connective hardware necessary to integrate the system.

\*\*\*Item Cost for One System.....\$44,892.50

Also provide Item Cost per Additional Training Sessions... \$1000.00

**Task 1b: Provide DPF Thermal Regeneration System that includes:**

- Thermal regeneration oven;
- Fume recovery system with HEPA Filter;
- All inlets, outlets, connective ductwork, and other connective hardware necessary to integrate the system.

\*\*\*Item Cost for One System.....\$4545.00

Also provide Item Cost per Additional Training Sessions... \$1,000.00

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**Task 2: Provide DPF Air Compressor/Air Dryer System that includes:**

- Tank;
- Platform and acoustical enclosure;
- Training, if needed

\*\*\*Item Cost for One System..... \$17,062.00

**Task 3: Provide DPF Cleaning/Regeneration Service that includes:**

- Testing and evaluation of filter;
- Pneumatic cleaning service;
- Thermal regenerative service;
- Packing and delivery of filter.

Item Cost for:

Testing and evaluation of filter .....\$25.00  
Pneumatic cleaning service.....\$100.00  
Thermal regenerative service..... \$90.00  
Packing and shipping of filter .....\$40.00

\*\*\*Total Item Cost System (Sum of all items).....\$255.00

